HIV Incidence Estimation for 2006

Indiana had an estimated 639 new HIV infections in 2006 according to a new surveillance system funded by the Centers for Disease Control and Prevention (CDC) and adopted by twenty-two states including the Indiana State Department of Health. This statewide estimate was determined by a new method of surveillance that provides a clearer picture of people who are recently infected with HIV. This is a leading edge estimate of actual new infections. This estimate, called incidence, accounts for all people who contracted HIV in 2006, even those who are yet untested.

The national Centers for Disease Control and Prevention (CDC) report was previously released August 6th 2008 in the Journal of the American Medical Association volume 300 pages 520 to 529. The CDC estimated there were 56,300 new HIV infections in the United States in 2006. This estimate emphasizes that HIV/AIDS is a leading public health threat. While 56,300 are 40% higher than the previously estimated 40,000 infections per year, this higher estimate actually represents advancement in surveillance, not growing infections per year. According to the JAMA article, by using an extended back-calculation model CDC showed that new HIV infections per year peaked in the mid 80's at 130,000, hit a low point of 49,000 in the early 90's and then peaked again in the late 90's at approximately 58,000. The new infection rate has been stable at around 55,000 persons per year since 2000.

The groundbreaking technology and new statistical methods used to calculate this new incidence number has been peer reviewed for prominent scientific journals: the Journal of the American Medical Association and Statistics in Medicine and through a consultation convened as part of the CDC Information Quality Peer Review for Influential Scientific Information (http://www2a.cdc.gov/od/peer/review.asp?id=173.) Part of the new technology was a laboratory test called BED HIV-1 Capture EIA, the application of which is known as the serologic testing algorithm for recent HIV seroconversion (STARHS.) The BED test is used to classify a diagnosed infection as recent (within 156 days) or long-term and is licensed for surveillance purposes only. STARHS allowed sampling of cases of recent HIV infections to be used to understand HIV infection among the general population. This new measure enhances our ability to track and respond to the forefront of the HIV/AIDS epidemic.

The new estimate, both nationally and statewide, indicates that the groups most strongly affected by new HIV infections are men that have sex with men (MSM) and communities of color. In Indiana fifty-five percent of new infections are among MSMs and forty percent of new infections are among minorities. Nationally the HIV incidence rate was 7 times as high among blacks (83.7 per 100,000) as among whites (11.5.) The rate among Hispanics (29.3) was almost 3 times as high as that among whites.

Evidence based and scientifically proven HIV prevention programs work to limit the spread of HIV. Prevention efforts include behavioral interventions focused around high risk sexual and needle sharing behaviors. Indiana is actively involved in treatment and prevention efforts of those at risk of getting HIV. Increased funding for prevention and treatment are necessary to increase efforts and stem the tide of new infections.

Appendix 1) 2006 Indiana HIV Incidence Estimation ‡

| STRATA | Incidence Estimate* | | | Std. Dev.** | HIV Diagnosis*** |
	Count	%	Recent Count †	Count	Count
Sex					
Male	452	70.7	89	104	414
Female	187	29.3	24	63	105
Race/Ethnicity					
White	380	59.5	71	77	280
Other†	259	40.5	42	74	239
Diagnosis Age					
13-29	261	40.8	59	51	176
30-39	220	34.5	32	55	155
40+	158	24.7	21	68	188
Transmission					
MSM	352	55.1	78	67	271
Other†(IDU,HET,NRR)	287	44.9	35	90.7	248
Total ±	639	100.0	113	126	519

‡Source: Indiana State Department of Health, Office of Clinical Data and Research, January 1, 2006 to December 31, 2006; Reported through August 1, 2008

*Incidence Estimate-Estimated Number of New HIV Infections. Estimations will vary according to STRATA.

**Std. Dev-Standard Deviation of Incidence Estimate 'Count'

***HIV Diagnosis-Newly Reported HIV Cases to ISDH though August 31, 2008 and diagnosed January 1, 2006 – December 31, 2006

†Recent Count-HIV Cases Classified as 'Recent' in Selected Time Period

±Total-Non-Stratified (includes all variables) HIV Incidence Estimation. Each set of STRATA seperately equals the number represented in the 'Total' with the exception of 'Std. Dev.'.

†Other categories-Represent All Race/Ethnicity's other than Whites and All Transmissions other than MSM. Categories represented in 'Other' were too small seperately to accurately estimate Incidence when stratifying.

MSM-Men who have sex with men
IDU-Injection drug user
HET-Heterosexual High Risk
NRR-No Reported Risk